



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,685	07/21/2003	Karlheinz Haubennestel	1238.002US2	5320
21186	7590	09/21/2005	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402-0938			METZMAIER, DANIEL S	
		ART UNIT		PAPER NUMBER
		1712		

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/623,685	HAUBENNESTEL ET AL.	
	Examiner Daniel S. Metzmaier	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 21 July 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-11 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. 09/075,613.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/21/2003</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-11 are pending.

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/075,613, filed on May 11, 1998. ***Specification***
2. The disclosure is objected to because of the following informalities: The cross-noting section of the specification should be updated to reflect the current status of the parent application.

At page 3, line 22; the chemical structure employs zeros rather than "O" to represent oxygen.

Appropriate correction is required.

3. The use of the trademark has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology. See the examples set forth in the instant specification. An example of said use would be at page 13, line 2; which sets forth "Desmodur N75" or the Tables throughout the specification.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

4. The abstract of the disclosure is objected to because it is not in single paragraph format. The abstract should be in narrative form and generally limited to a single

Art Unit: 1712

paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants language "the dispersing agent obtainable by" is indefinite since it does not positively claim the dispersing agent, the metes and bounds of the claimed subject matter is unclear. The term "obtainable" is deemed a preferred embodiment. Since the claims do not require materials "to be obtained" by the process steps set forth in the claims, the claims may be construed as open to any dispersing agent made by unspecified methods of making.

The claims are indefinite since it employs an improper alternative grouping, e.g., "at least one amine can be used from the group comprising a) . . . ". The alternative groups employ open language. It is unclear what is the scope of the alternative grouping regarding the scope of the individual members, e.g., "divalent radical comprising", and the scope of the group as a whole. See MPEP 2173.05(h).

The phrase "of the general formula" is unclear since it is unclear what formulae are contemplated that are unspecified. It is unclear how said "amine" is "used". The phrase "characterized in that" is interpreted to be synonymous with "comprising".

The phrase: "the aminolysis" lacks proper antecedent basis in the claim.

In claim 3 it is unclear from what "at least one further, different monomer" is different.

In claim 7, "the product" lacks proper antecedent basis in claim 1 since "the product which is obtained" is not set forth.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Art Unit: 1712

8. Claims 1-7 and 10-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsubaki et al, 5,717,048. Tsubaki et al (examples) discloses the claimed polymers and copolymers, which are then further alkylated with an alkylating agent to form quaternary ammonium salts (attention is directed to instant claim 7). The claims are anticipated by the intermediate ternary amine and also, the further alkylation of the tertiary amine product, which has utility as antistatic agents. Since the catalyst does not substantively change the reaction and the copolymers exemplify acrylic monomers, the polymers would either be anticipated as inherently the same and/or self catalyzed by the acidic monomers.

9. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Thomas et al, US 2,595,907. Thomas et al (examples) teach polymers, which read on the claimed amidoamines of acrylic acids. Thomas et al (column 9, lines 18-23) discloses the polymers are more amenable to dying.

10. Claims 1-7 and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Naarmann et al, US 4,060,679. Naarmann et al (example 1) discloses a terpolymer of 55% styrene, 30% dimethylaminopropylacrylamide, and 15% methyl acrylate having molecular weight of about 2000 (1950). Said polymer was treated with acetic acid to form the acetic acid salt form of the polymer.

The 30% dimethylaminopropylacrylamide portion of the polymer reads on the amide and ester groups of the amides formed from the aminolysis of the acrylic acid alkyl ester polymer with dimethylaminopropylamine. Naarmann et al further claims 15 to 70 weight % of the amide units and up to 15 weight % of the ester groups. For

dimethylaminopropylacrylamide and methyl acrylate, this equates to about 37 % amide groups or lower (26%) for other amide groups claimed based on the ester and amide groups. Said range reads on claimed products formed by aminolysis. Naarmann et al (column 3, lines 22-23) discloses a molecular weight range of 600 to 4500. Said range reads on applicants' claimed range. See MPEP 2173.05(c).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 1-11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Melamed, US 2,980,657. Melamed (example 1; column 3, lines 1-5; column 4, lines 53 et seq; column 5, lines 38-56; column 6, lines 54 et seq; and column 7, lines 12-32) disclose making tertiary amine

compounds which are then quaternized in further sequence steps by reaction with a alkyl-halide or benzyl-halide. Melamed (example 1) discloses compounds made from methyl polyacrylate having a molecular weight of 15,000 to 20,000 are reacted with dimethylpropylamine to form a polymer that is approximately 57% aminolyzed.

The instant claims define polymers that are aminolyzed. This is deemed to at least overlap at the about 50% end point since the claims and the reference allows for variation.

Furthermore, Melamed (column 7, lines 12-32) disclose the characterization of polymers having lower degrees of aminolysis including polymers having at least 20% of the ester groups aminolyzed compared with polymers having at least 30% of the ester groups aminolyzed. (It is noted, the reference refers to polymers made by aminolysis having at least 20% of the ester groups converted to quaternary ammonium chloride. This would require the formation of corresponding polymers having tertiary amino groups. The Melamed characterization (column 7, lines 12-32) is evidence of the fact that Melamed made said polymers and therefore anticipates the claims reading thereon. Attention is also directed to Melamed example 11.

Melamed (column 10, lines 6-9) disclose the use of the polymers as pigment dispersants for pigment-dyeing or printing of textiles.

To the extent the Melamed differs from the claims in the disclosure of a single material having the claimed molecular weight, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ as a suggested combinations within the teaching of the Melamed reference.

Melamed (column 7, lines 33 et seq) disclose the use of the materials in liquid vehicles or solvents; in paper processing or cellulose pulps; and dying and as acid group anchors. Melamed (column 10, lines 7-9) discloses or at least suggest the use of patentees' materials as pigment dispersants.

14. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Emmons et al, US 4,120,839. Emmons et al (abstract and claims) discloses aminolysis products of acrylate copolymers for use in epoxy-based coating and adhesive compositions.

Emmons et al differs from the claims in the particular polyamines employed as the aminolysis reactant exemplified. Emmons et al (examples) exemplifies ethylene diamine, diethylenetriamine, hexamethylenediamine, and di(3-aminopropyl)-amine.

Emmons et al (column 3, liens 35-59) teaches various representative polyamines, which may be employed in the compositions. Emmons et al (lines 43-44) teaches the use of N-aminoethylpiperazine. Emmons et al (column 3, lines 14-22, and column 3, lines 16-29) teaches molecular weights of preferably 1000 to 5000. Emmons et al (column 4, lines 15-24) teaches aminolysis catalyst including acid catalyst and (column 4, lines 32-40) the claimed utility as a pigment binder for coating compositions such as textile printing and dying compositions. Emmons et al (column 5, lines 44 et seq) teaches the formation of internal salts and their capacity to act as dispersing agents for pigments and fillers requiring dispersion in coating compositions.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the N-aminoethylpiperazine as an obvious functional

equivalent to the exemplified amines of the Emmons et al reference. The process of claims 10 and 11 are clearly encompassed by the disclosure of the Emmons et al reference differing only in the polyamine employed. With respect to claims 2 and 11, the aliphatic amines are clearly anticipated (examples) and/or obvious (column 3, lines 35-59) in the Emmons et al reference.

Double Patenting

15. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

16. Claims 1-7 and 10-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,596,816. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims encompass the patented claims.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Efka-Chemicals BV, EP 311 157, teaches heterocyclic amine

species and the limitation regarding reactive species monomers. Attention is directed to page 3, lines 5 et seq and the examples, such as example 1, which disclose the use of ethyl hexyl methacrylate. Ethyl hexyl methacrylate = C₈H₁₇-O-C(O)C(CH₃)=CH₂, is an acrylate ester.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM